



# Inventory Control Maturity Continuum



## Introduction

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One of the unique attributes of the medical device industry is that product is typically consigned to hospitals, distributors, and sales reps before being sold during surgery. Tracking these medical devices from manufacturer to patient causes a major challenge to manufacturers because billions of dollars of inventory are scattered throughout the country and out of the manufacturer's operational control. For many manufacturers, the supply chain beyond the point of consignment becomes an opaque, inefficient, and ineffective system. A system that is nearly impossible to manage effectively and adds significantly to the cost of healthcare.

Even in today's technologically advanced world, many manufacturers rely on enterprise resource planning (ERP) software, customer relationship management (CRM) systems, or home-grown solutions to attempt to track this detailed and highly mobile inventory. Neither an ERP system nor a CRM system was ever designed to perform complex inventory management. They struggle to process inventory transactions, track inventory at a kit/tray level, and schedule and sell implants during surgical procedures while still maintaining visibility and traceability at an item level along with all of the current and future regulatory requirements. As for the "home-grown" variety, the best that can be said is that they are narrow in scope and are most effective on the day they are launched. Most home-grown solutions are ineffective, do not incorporate best practices, and are inadequately maintained over time.

The bottom line? Medical device manufacturers have built a distribution network with massive inventory investments, large annual write-offs, inefficient inventory control, countless field productivity hours devoted to tracking and accounting for inventory, and an overall lack of visibility of product placement and usage.

As with supply chains across all industries, there is a continuum of inventory control maturity in the medical device world. These maturity levels vary from white boards and spreadsheets to manipulated ERP and CRM systems, and at best, industry optimized inventory control programs. Where do companies fall on this continuum? How do we identify if a manufacturer is antiquated or industry optimized? What is the next generation thinking that lies beyond industry optimized?

This piece is designed to provide a review of the medical device inventory control maturity continuum and offer a glimpse of the future for medical device manufacturers. The goal is to help them to identify their inventory control level on the maturity scale and to evaluate what they can implement to achieve industry optimization and best position themselves for future innovation. As the medical device industry continues to evolve, the companies that keep pace with technology will be the leaders of the health care revolution.

## Culture of Change

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To stay a step ahead of competitors, manufacturers must be driven, innovative, productive, effective, and efficient. Valuable resources, especially time, cannot be lost to inefficiencies. Advancing from the first to the peak level on the inventory control maturity continuum requires a culture that recognizes and champions the need for change. Medical device manufacturers poised to realize industry optimization and positioned to successfully adopt future innovation share the following four characteristics:

**They are proactive.** Proactive manufacturers are not complacent about inventory. They are prepared to enhance inventory control practices by identifying and integrating new technology to streamline processes and build more visibility, accountability, and control into their business.

**They embrace technology.** Manufacturers on the road to industry optimization and what comes next adopt new solutions. They leave antiquated systems behind and implement technology that enhances accuracy, improves efficiency, eliminates inventory discrepancies, and decreases payment issues.

**They cultivate partnerships.** The ability to establish meaningful partnerships is one of the ways manufacturers extend their capabilities and develop advanced processes. Partners bring new energy and ideas and enable manufacturers to more expertly achieve the next level of productivity.

**They attack inefficiencies.** The ability to identify and eliminate waste in the supply chain allows manufacturers to conserve their valuable resources and focus on differentiators in the market. They make fact-based decisions on how to allocate resources and use them to their greatest advantage.

## Phases of Inventory Control

ARCHAIC	
<b>Case scheduling</b>	Reps schedule cases on phones or calendars. Manufacturer has no visibility of case scheduling.
<b>Consignment inventory management</b>	Some software may be used to manage inventory in terms of purchasing and allocation.
<b>Loaner kit management</b>	Visibility to loaner kit content is opaque at best. Location and responsible party is tracked by white board or spreadsheet/Access database.
<b>Sales order processing</b>	Sales ordering is handled by paper-based sales order processing. Replenishment is managed through manual process, i.e. email, voicemail, and/or fax.
<b>Data capture</b>	Processes are handled through a combination of paper-based and electronic systems and are not connected to an overall digital system.
<b>Data utilization</b>	Little or no historic data is available for use in improving management.
<b>Physical inventory management</b>	Physical location of inventory is managed by white board and spreadsheet/Access database.
BASIC	
<b>Case scheduling</b>	Reps are scheduling using phones or calendars.
<b>Consignment inventory management</b>	ERP systems are used to manage inventory locations at either a top level tray or individual item level.
<b>Loaner kit management</b>	Loaner kit content is captured only at top level. Responsible party is maintained at distributor level. Location is captured from "ship to" info and identifiable via tracking number. No visibility of location if moved from its original "ship to" location.
<b>Sales order processing</b>	Sales orders are managed through paper-based processes.
<b>Data capture</b>	Limited electronic systems hamper visibility.
<b>Data utilization</b>	Inventory management improvements are handled through ERP add-ons and customization.
<b>Physical inventory management</b>	Physical inventory is located at hospitals, distributor, and sales rep sites.

## Phases of Inventory Control

CONTROLLED AND MANAGED	
<b>Case scheduling</b>	Reps are still scheduling using phones or calendars.
<b>Consignment inventory management</b>	ERP systems are used to track consignment.
<b>Loaner kit management</b>	Some level of software is employed for loaner kit processing.
<b>Sales order processing</b>	Sales orders are managed using an electronic document creation solution or home-grown order management software. No direct link to ERP for processing of sales order.
<b>Data capture</b>	ERP system or another business intelligence tool captures some data.
<b>Data utilization</b>	Data utilization requires monthly inventory reconciliation.
<b>Physical inventory management</b>	Physical inventory is located at hospitals, distributor, and sales rep sites.
INDUSTRY OPTIMIZED	
<b>Case scheduling</b>	Case scheduling is managed with integrated software that provides complete visibility across the organization.
<b>Consignment inventory management</b>	Consignment inventory is tracked at item, tray, and kit level, including responsible party at rep level and physical location of product.
<b>Loaner kit management</b>	Real-time visibility of loaner kits is available at rep level as well as status tracking of internal kit process. Ability to see and relocate loaners from one location to another for infield transfer.
<b>Sales order processing</b>	Sales orders are entered into enterprise-wide system through mobile phone app. Integrated processing of usage, replenishment, and sales order.
<b>Data capture</b>	There is real-time capture of item level detail upon each transaction.
<b>Data utilization</b>	Detailed information offers rich data set and data analytic tools provide predictive, actionable data.
<b>Physical inventory management</b>	Physical inventory is located at hospitals, distributor, and sales rep sites.

## Phases of Inventory Control

NEXT GENERATION THINKING	
<b>Case scheduling</b>	Case scheduling is managed with integrated software that provides complete visibility across the organization. Case scheduling is integrated with Surgeon's office, central sterilization, operating room, and payor.
<b>Consignment inventory management</b>	Warehousing and loaner kits are centrally managed.
<b>Loaner kit management</b>	Loaner kits are replenished point to point.
<b>Sales order processing</b>	Sales orders are entered into enterprise-wide system through mobile phone app.
<b>Data capture</b>	Integrated software solutions detail customer-specific inventory levels and just-in-time inventory.
<b>Data utilization</b>	Analytics drives inventory allocation and provides both predictive and prescriptive inventory modeling.
<b>Physical inventory management</b>	Inventory is a hybrid of centrally housed and forward deployed. Physical location is a shared space, and product at hospitals is kept as just-in-time inventory.

## Financial Impact

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As companies progress through the inventory control maturity continuum, they begin to understand and realize the business growth and efficiency gains achievable through improved inventory control and utilization. The simplest financial impact to access is the cash flow impact of inventory reduction. One dollar out of inventory is one dollar more in cash. With that reduction also comes a reduction in carrying cost. For the most efficient operations, inventory carrying cost varies from 20% to 30%. A \$1 million reduction of inventory would take \$200,000 to \$300,000 of cost off of the P&L/Income statement. These are the most direct impacts of inventory control as companies progress through the continuum.

Excess inventory and lack of visibility add ancillary costs as well as drain the sales engine. An opaque supply chain drives operational inefficiencies, in addition to the simple cost required to manage the inventory. Efficiency gains of 10% to 15% can be achieved through customer service, distribution, and management, and simply eliminating the confusion of inventory control operating below optimized levels.

Perhaps the most impactful improvement of increase inventory control and visibility is the ability to elevate sales efficiency. Poor inventory control and inefficient order management process can occupy 6-8 hours a week of a sales professional's time. Converting half of that wasted time into productive sales is a 7.5% to 10% growth in sales. As the role of the sales rep in medical device evolves, driving improved sales efficiency becomes more important than ever.

## The Value of iTraycer

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Medical Tracking Solutions, a team of medical device industry experts, developed iTraycer to meet the day-to-day challenges of medical device companies. iTraycer provides real-time tracking of medical devices and biologics – visible by part, lot, and serial numbers – from manufacturer to patient. The system's multifunctional software facilitates communication and collaboration across the enterprise and enables companies to make critical, fact-based decisions with real-time information. Simple but robust, iTraycer offers medical device makers increased profitability that comes from improved sales efficiency, advanced inventory control, increased operational effectiveness, and enhanced financial accountability. The mobile application enables sales professionals to spend more time selling and less time hunting down inventory and chasing disputed invoices. With the 100% visibility that iTraycer allows, inventory can be reduced by 10-30%. And, iTraycer's automated system eliminates paperwork and increases accuracy and accountability across the enterprise. The end result? iTraycer delivers a 2-4% boost to the bottom line.

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